

REMARKS

In accordance with the foregoing, claims 1, 4, 12, 15, and 16 are amended. No new matter is believed to be added. Claims 1 and 3-16 are pending and under consideration.

CLAIM REJECTIONS UNDER 35 USC § 103

Claims 1, 3-6, 12, 15, and 16 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Pat No. 6,859,268 to Chou et al. ("Chou") in view of U.S. Patent No. 6,813,021 to Chung et al. (hereinafter "Chung").

Claims 7-10 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chou and Chung and further in view of U.S. Patent No. 6,512,612 to Fatehi et al. ("Fatehi").

Claim 11 is rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chou, Chung and Fatehi and further in view of U.S. Patent No. 6,154,273 to Suzuki ("Suzuki").

Claims 13 and 14 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Chou and Chung and further in view of U.S. Patent No. 6,885,820 to Eder et al. ("Eder").

Independent claims 1, 4, 12, 15, and 16 are amended herewith to further specify the claimed subject matter. The claim amendments are supported by the originally filed specification, for example, FIG. 5, and page 10 line 28 to page 11, line 9 of the specification. No new matter is believed to be added.

Amended independent claim 1, and claim 3 depending from claim 1 patentably distinguish over the prior art at least because the following features recited in amended claim 1 are not anticipated or rendered obvious by the applied prior art:

measuring a value of said degree of polarization of said optical signal after a predetermined amount of time has elapsed from a time when said initial value was stored [...] said predetermined amount of time [being] set to measure the change in said degree of polarization due to a change in the optical signal to noise ratio, when a change in said degree of polarization due to a change in a polarization mode dispersion is compensated

Chou teaches compensating polarization mode dispersion in fiber optic transmission systems. Chung discloses monitoring signal to noise ratio using a polarization nulling method. Chou and Chung do not render obvious the claimed subject matter because Chou does not determine the signal to noise ratio based on values of the polarization measured at different times, and Chung's method alters the polarization to zero in order to monitor the signal to noise ratio.

In contrast to the prior art, according to claim 1, **after** the polarization mode dispersion is compensated, the polarization is measure to determine the change from an initial value due to the noise. None of the cited prior art references suggests measuring the degree of polarization after a predetermined amount of time which is set to measure the change in said degree of polarization due to a change in the optical signal to noise ratio, when a change in said degree of polarization due to a change in a polarization mode dispersion is compensated.

Amended independent claim 4 and claims 5-11, 13 and 14 depending directly or indirectly from claim 4 patentably distinguish over the prior art at least because the following features recited in amended claim 1 are not anticipated or rendered obvious by the applied prior art:

said degree of polarization measurement section that measures said degree of polarization of said optical signal after a predetermined amount of time has elapsed from a time when said initial value was stored, and

said predetermined amount of time is set so that said degree of polarization measurement section to measure the change in said degree of polarization due to a change in the optical signal to noise ratio, when a change in said degree of polarization due to a change in a polarization mode dispersion is compensated.

Amended independent claim 12 patentably distinguishes over the prior art at least by reciting:

an optical signal to noise ratio calculation section which determines a change amount in an optical signal to noise ratio of said optical signal, by using the measured value of the degree of polarization obtained by the degree of polarization measuring device in said automatic polarization mode dispersion compensation apparatus after a predetermined amount of time has elapsed from a time when said initial value was stored, the predetermined mount of time being set to ensure that that the polarization measuring device measures the change in said degree of polarization due only due to a change in the optical signal to noise ratio, while a change in said degree of polarization due to a change in a polarization mode dispersion is compensated.

Amended independent claim 15 patentably distinguishes over the prior art at least by reciting:

determining a change amount in the signal to noise ratio of the optical signal based on a difference between a measured value of a degree of polarization of said optical signal at a time when the change in the degree of polarization due to a polarization mode dispersion is compensated and an initial value of the degree of polarization.

Amended independent claim 16 patentably distinguishes over the prior art at least by reciting:

measuring a degree of polarization of the part of the signal at different times, and comparing the measured degree of polarization with a reference value of the degree of polarization to monitor a change of the signal to noise ratio based on a change of the measured degree of polarization.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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